

Recommendations of the EPSDT Screening Guidelines Committee

April, 2004

Developmental/ Behavioral Surveillance and Screening

Under Federal EPSDT rules, screening visits consist of a comprehensive health and developmental history, an unclothed physical exam, vision and hearing screenings, appropriate immunizations, laboratory tests, and health education. The purpose of these visits is to identify physical, mental, or developmental problems and risks as early as possible and to link children to needed diagnostic and treatment services. To comply with these rules and provide the highest quality of care, surveillance and screening procedures should be incorporated into the ongoing health care of the child and family as part of the provision of the medical home, as defined by the AAP (RE0062 - Developmental Surveillance and Screening of Infants and Young Children).

AAP Periodicity Guidelines (American Academy of Pediatrics Recommendations for Preventive Pediatric Health Care) call for a developmental/behavioral assessment by history and appropriate physical examination at each visit interval. If findings identify concerns, specific objective developmental testing is needed. Developmental surveillance and developmental screening are the recommended methods for early detection of problems.

Developmental surveillance has been defined as “a flexible, continuous process whereby knowledgeable professionals perform skilled observations of children during the provision of health care. The components of developmental surveillance include eliciting and attending to parental concerns, obtaining a relevant developmental history, making accurate and informative observations of children, and sharing opinions and concerns with other relevant professionals.” Pediatricians and other health care providers often use age-appropriate developmental checklists to record milestones during preventive care visits as part of developmental surveillance. Developmental screening is a brief procedure, using a standardized tool, to determine whether a child requires further and more comprehensive evaluation.

All infants and young children should be assessed for developmental delays. School-age children and adolescents should receive additional evaluation for emotional/behavioral problems. The use of standardized screening instruments improve the accuracy of

developmental assessments, and such tools exist that are both efficient and effective in the pediatric office and other settings such as primary health and public health centers. Tools listed below are recommended tools and are listed by the focus of the tool and the target age range. Providers need to develop a strategy to provide periodic assessments in the context of ongoing office based primary care. It is recognized that practice setting will influence the type and frequency of assessments provided.

Practices should maintain and update knowledge of developmental issues, risk factors, screening techniques, and community resources for consultation, referral, and intervention. This should include acquiring skills in the administration and interpretation of reliable and valid developmental screening techniques appropriate for the population served.

Besides developmental/emotional/behavioral surveillance and screening, the listing includes a specialized screen for maternal post-partum depression. Assessment for this condition should be made in the first weeks after birth, and appropriate referral initiated as needed.

The listing also includes specific screens for autistic spectrum disorders. Early detection and referral for early intervention has been shown to improve long term outcomes in this group of disorders. In addition, the prevalence of these disorders continue to increase.

Documentation of developmental/emotional/behavioral surveillance and screening should include a description of the method used, findings, and referral or treatment plans.

Developmental/Behavioral Screening Tools/Tests and Documentation Guidelines

Documentation Guidelines

Documentation should include a description of the developmental behavioral screening method. The following items should be documented in the medical record when developmental \ behavioral screening is done during an EPSDT encounter:.

- Any parental concerns about the child's development / behavior.
- A review of major age appropriate areas of development / behavior (e.g. motor, language, social, adaptive).
- An overall assessment of development / behavior for age (e.g. normal, abnormal, needs further evaluation).
- A plan for referral and /or further evaluation when indicated.

When validated developmental screening tests are performed in addition to the preventive medicine service or other services providers can report CPT code 96110 in addition to the Preventive Medicine Service. Examples listed in CPT include the Denver II and the Early Language Milestones Survey. This service is reported in addition to Preventive Medicine and other evaluation and management or screening services (hearing, vision, and laboratory) performed during the same visit. Informal developmental checklists are considered part of the history of the preventive medicine visit, and not reported and billed separately.

Developmental Screening Instruments

The following are list includes examples of developmental/behavioral screening tests approved by the EPSDT Screening Guidelines Committee for use in the EPSDT program. They have been approved and validated and used nationally. Providers who use alternative instruments should make a selection based on a similar standard of practice. These guidelines are subject to update and revision as needed.

Focus of Screen	Targeted Age Range	Name of Screen	Age Range for Screen	Description	Scoring	Accuracy	Time Frame
Parental Post-Partum Depression	6 – 8 Weeks post-natal	Edinburg Postnatal Depression Scale (EPDS) JL Cox, JM Holden, R Sagovsky, from British Journal of Psychiatry, June 1987, Vol. 150. User may reproduce the scale without further permission providing they respect the copyright by quoting the names of the authors, the title and the source of the paper in all reproduced copies.	6 – 8 Weeks postnatal	Developed to assist primary care health professionals to detect mothers suffering from postnatal depression. Scale consists of ten items and indicates how the mother has been feeling during the previous week; it may be usefully repeated after two weeks.	Response categories are scored 0, 1, 2 and 3 according to increased severity of the symptoms. Items marked with an asterisk are reversed scores. The total score is calculated by adding together the scores for each of the ten items.	Source article indicates that with mothers, who scored above threshold, 92.3% were likely to be suffering from a depressive illness of varying severity.	Less than five minutes
General Development (Including social language, motor, cognitive, self-help)	Birth till age nine. Generally developmental screens are indicated for older children (school age and above) only if it is suspected that a developmental problems has not been previously detected and/or diagnosed.	Ages & Stages (ASQ) (Formerly Infant Monitoring System) Paul H. Brookes, Publishers PO Box 10624 Baltimore, Maryland 21285. (1.800.638.3775); www.brookespublishing.com (Initial cost of \$190 for complete system [other purchase options such as questionnaire only, available]; also	0 to 60 months	Covers 19 different age intervals. Each questionnaire contains 30 developmental items written in simple, straightforward language, with reading levels ranging from fourth through sixth grade. Each of the 19 questionnaires (for a specific age interval) covers the following areas: communication,	Single pass/fail score	Sensitivity ranges from 70% to 90% at all ages except the 4-month level. Specificity ranges from 76% to 91%	Scoring takes about 7 minutes; questionnaire can be completed in 10-20 minutes.

Focus of Screen	Targeted Age Range	Name of Screen	Age Range for Screen	Description	Scoring	Accuracy	Time Frame
	Children beginning school and in early primary grades may benefit from developmental screen as a means to detect learning problems	available on CD-ROM; but questionnaires, once purchased are reproducible and may be copied after initial purchase)		gross and fine motor, problem solving and personal-social. Clear drawings and simple directions help parents indicate children's skills. There are separate copyable forms of 10 to 15 items for each age range (tied to health supervision visit schedule). Can be used in mass mail-outs for child-find programs. Available in English, French, Spanish and Korean.			
		Brigance Screens. Billerica, MA: Curriculum Associates, Inc. (1985), 153 Rangeway Road, N. Billerica, MA 01862 (1.800.225.0248)	21 to 90 months	Seven separate forms, one for each 12 month range. Taps speech-language, motor, readiness and general knowledge at younger ages and also reading and math at older ages. Uses direct elicitation and observations. Acceptable as a screen, but due to extensive direct testing, used more often as a secondary screen	Cutoff and age equivalent scores	Sensitivity and specificity to giftedness and to developmental and academic problems was 70% to 82%	10 minutes (direct testing only)

Focus of Screen	Targeted Age Range	Name of Screen	Age Range for Screen	Description	Scoring	Accuracy	Time Frame
		<i>Child Development Inventories</i> (formerly Minnesota Child Development Inventories (1992). Child Development Review Behavior Science Systems, Inc. Box 19512 Mpls., MN 55419-9998 612-850-8700 fax 360-351-1374 Childdevelopmentreview.com Heidi@childdevrev.com	Birth to 72 months	60 yes/no descriptions with separate forms for 0-18 months <i>(Infant Development Inventory {IDI} 18-36 months.</i> <i>(Early Child Development Inventory {ECDI})</i> and 3 years to Kindergarten <i>(Preschool Development Inventory {PDI})</i> IDI includes a developmental milestones chart for the first 21 months of life span, across five domains (social, self-help, gross and fine motor and language). Can be mailed to families, completed in waiting rooms, administered by interview or by direct elicitation	A single cut-off tied to 1.5 Standard Deviations below the mean	Sensitivity was 75% or greater across studies and specificity was 70%	About 10 minutes (if interview needed)
		Child Development Review Child Development Review Behavior Science Systems, Inc. Box 19512	18 months to kindergarten	6 questions for parents and a 26 item possible behavioral and emotional problems. The chart that is included can be used as a parent interview	Parents' responses to the six questions and problem checklist are classified as	Sensitivity 68% or greater. Specificity 88%	5 minutes (if interview needed)

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		<p>Mpls., MN 55419-9998 612-850-8700 fax 360-351-1374</p> <p>Childdevelopmentreview.com</p> <p>Heidi@childdevrev.com</p> <p>Manual, \$11, pad of 25 parent questionnaires backed with First Five Years Child Development Chart, \$11.</p>		<p>guide or to observe and record development in five areas: social self-help, gross and fine motor, and language. Development and age norms are based on research with the Child Development Inventories (see above)</p> <p>problems list, backed with a First Five Years Child Development Chart. The chart can be used for observation, as a parent interview guide, or as parent education tool. The CDR helps determine whether a child's development is "normal," borderline," or "delayed" in five developmental areas; energy, motor symptoms, language symptoms, behavioral and emotional problems. The chart that is included can be used as a parent interview guide or to</p>	<p>indicating 1) No problem, 2) a Possible Problem, or 3) Possible Major Problem. The Child Development chart results are compared to age norms, and classifies as "typical: for age in all areas, or as "borderline" or "delayed" in one or more areas of development. Guidelines for identifying indicators of need for follow-up are described in the manual</p>		

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				observe and record development in five areas: social self-help, gross and fine motor, and language.			
		Denver-II Denver Developmental Materials, Inc. P.O. Box 371075 Denver, CO 80237-5075 (303) 355-4729** 1-800-419-4729 Fax* (303) 355-5622 www.denverii.com/DenverII.html Cost: Test kit, \$50; Training Manual, \$25; Test forms (pkg of 100), \$24 for English; \$28 for Spanish.	Birth to 6 Years	Combination of directly elicited and interviews, tapping language, personal-social gross and fine motor, but not academic or pre-academic skills. Available in English and Spanish	Pass/fail Questionable/un-questionable	Sensitivity 80% and specificity 40% or sensitivity 40% and specificity 80% depending on how the questionable score is handled.	15 minutes for younger children, 26 minutes for older children (combination of direct and interview items)
		Parents' Evaluations of Developmental Status (PEDS) (1997) Ellsworth & Vandemeer Press, Ltd. P.O. Box 68164, Nashville, TN 37206 Phone: 615-226-4460; fax: 615-227-0411 http://www.pedstest.com	Birth to 9 years	10 questions eliciting parents' concerns. Can be administered in waiting rooms or by interview. Available in English & Spanish. Written at the 5 th grade level. Normed in teaching hospitals and private practice.	Categorizes patients into those needing referrals, screening, counseling, reassurance, extra monitoring	Sensitivity ranged from 74% to 79% and specificity ranged from 70% to 80%.	About 2 minutes (if interview needed)

Focus of Screen	Targeted Age Range	Name of Screen	Age Range for Screen	Description	Scoring	Accuracy	Time Frame
		(\$38.99)					
Autism & Pervasive Development Disorders (PDD)	12 months thru 36 months of age, depending upon screening tool used, and age of child at time of screen. Child should be screened once during 12 to 36 month age interval.						
		Modified Checklist for Autism in Toddlers (M-CHAT). DL Robins, D. Fein, ML Baron and JA Green. Modified Checklist for Autism in Toddlers (M-CHAT). Journal of Autism and developmental Disorders.	18 months of age	Consists of 23 yes/no questions using the original nine from the CHAT(see above). Goals of the M-CHAT are to improve the sensitivity of the CHAT and position it better for an American audience.	Child fails the checklist when 2 or more critical items or any three items are failed. Since it is a screen, a “failing” score is viewed as a need for further evaluation as not all children who have a failing score meet the criteria for a	Authors indicate that research is pending on sensitivity and specificity	About five minutes

Focus of Screen	Targeted Age Range	Name of Screen	Age Range for Screen	Description	Scoring	Accuracy	Time Frame
					diagnosis on the autism spectrum		
Behavioral/Emotional	4 through 20 Years of Age	Eyeberg Child Behavior Inventory	2 ½ to 11 year (best used to age 4)	A total of 36 short statements of common behavior problems. A score of more than 16 suggest referral for behavioral interventions. Fewer than 16 enable the measure to function as a problem list for planning in-office counseling and selecting handouts.	Single refer/non-refer score for externalizing problems (e.g. conduct, attention, aggression)	Sensitivity 80%; specificity 86%	About 7 minutes
		PEDS	Note: The PEDS can also be used to screen possible behavioral problems up to age 9	See description above under General Development			
		Pediatric Symptom Checklist (PSC) Jellinek MS, Murphy, JM, Robinson, J et al. Pediatric Symptom Checklist: Screening school age children for psychosocial dysfunction. Journal of	6 to 18; with modification of items (see article, can be adapted for ages 4 & 5)	35 short statements of problem behaviors to which parents respond with "never," "sometimes," or "often." The PSC screens for academic and emotional/behavioral	Single refer/non-refer score	Sensitivity ranged from 80% to 95%. Specificity in all but one study was 70% to 100%.	About 7 minutes (if interview needed)

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		Pediatrics, 1998; 112-201-209 (the test is included in the article and in the PEDS manual); can be downloaded at: www.state.tn.us/tenncare/provider.html		difficulties.			
		PSC-17 Gardner W. <i>et. al.</i> The PSC-17: A brief symptom checklist psychosocial problem subscales: A report from PROS and ADSPN. <i>Ambulatory Child Health.</i> 1999; 5:225-236. Can be downloaded at: www.pedstest.com/links/files/psc.pdf	4 to 18	17 short statements of problem behaviors to which parents respond with "never," "sometimes," or "often." The PSC-17 screens for academic and emotional/behavioral difficulties, and includes three subscales (Aggression, Attention and Depression.)	Cut-off scores of 7 or above for aggression and attention subscales; 5 or above for depression subscale; or 15 or above for the entire 17 item screen.	Good sensitivities (.77 - .87) and specificities (.68 - .80) at the optimal cutoff points were reported in the Gardner <i>et. al.</i> study.	Less than 7 minutes.

- Accuracy is defined as both sensitivity and specificity
- Sensitivity = percentage of children with disabilities identified as probably delayed by a screening test.
- Specificity = percentage of children without disabilities identifies as probably normal by a screening test

* Focus of Screen:

Includes the range of problems screened (i.e. general developmental, autism and pervasive developmental disorders, post-natal depression, behavioral)

Targeted Age Range:

Indicates within what age ranges these problems are screened.

Description:

Provides information on alternatives ways (if available) to administer measures (e.g., waiting rooms).

Scoring:

Shows general information regarding pass/fail criteria and cutoff scores

Accuracy:

Shows the percentage of patients with and without problems identified correctly.

Time Frame:

Shows the cost of professional time needed to administer and score each measure. For parent report measures, administration time reflects not only scoring of the results, but also each test's reading level and the percentage of TennCare patients with less than a high school education (who may or may not be able to complete measures due to literacy problems and will thus need office staff to read the screen to them.)

References

AAP Periodicity Guidelines (American Academy of Pediatrics recommendations for Preventive Health Care) (RE9939)

<http://www.aap.org/policy/periodicity.pdf>

Developmental Surveillance and Screening of Infants and Young Children (RE0062)

<http://www.aap.org/advocacy/archives/julyscreen.htm>